

Depression Screening of College Students at a Student Health Center: A Quality Improvement
Initiative

DNP Final Project

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Abstract

Many young adults entering college experience multiple developmental transitions and challenges to coping during their college career which may increase their risk of depression. Additionally, many young adults experience their first signs of depression just before or during their college years. Depression screening is recommended for adults in practices that can provide resources of diagnosis, effective treatment and follow up. The purpose of this quality improvement project is to develop an evidence-based screening protocol for healthcare providers to use within a college healthcare setting with students aged 18-24 years for earlier identification and treatment of depression. The Model of Evidence-Based Change served as a guide in order to develop the depression screening protocol. A brief needs assessment of current healthcare provider screening practices identified the need for an improved protocol. The development of a standardized evidence-based depression screening protocol utilizing the Patient Health Questionnaire-2 (PHQ-2) and the Patient Health Questionnaire-9 (PHQ-9) was formulated after an extensive review of literature. An educational presentation via a Panopto video was developed for increased provider awareness of the improved protocol and progress note forms were revised to reflect the protocol implementation. A group discussion with healthcare providers was held to share rationale for the development of the protocol and helped to identify thoughts and concerns regarding the protocol implementation. In conclusion, this DNP project will supply healthcare providers with an improved protocol, education and updated documentation forms in order to improve patient outcomes by earlier identification and treatment of depression.

Chapter I

Introduction

Statement of the Problem

For many young adults, the progression from high school into college is an exciting chapter in one's life but it can also be filled with challenges. Significant life changes may involve academic outcomes, exposure to drug and/or alcohol usages and poor choices that are associated with adverse consequences and psychological distress. Depression can occur at all ages and in all races, ethnicities, and socioeconomic levels (Centers for Disease Control and Prevention [CDC], 2014). Straight-A students, star athletes and individuals from all academic majors may experience clinically significant depression (Schwartz, 2010). In 2014, the American College Health Association conducted a nationwide survey of college students in which it was reported that nearly 32% of college students reported feeling, "...so depressed that it was difficult to function at some time during the past year" (American College Health Association [ACHA], 2014). The American College Health Association (2012) also found that as many as 16% of college students may experience depression during their college career and that depression is identified as the sixth leading barrier to academic performance. Additionally, depression may be a catalyst for suicide and suicide is the second leading cause of death in young adults aged 15 to 24 years (Centers for Disease Control and Prevention [CDC], 2015)

In accordance with the Healthy Campus 2020 initiative, the concept of increasing the proportion of students reporting a diagnosis of depression as well as receiving treatment is identified as a major health component for quality academic performance and decreasing the risk of suicide (American College Health Association [ACHA], 2012). Therefore, the screening of depression in college students is of utmost importance in order to identify and treat students who

have depressive symptoms that could indicate clinically significant depression in need of professional treatment or other types of interventions. Screening may also prevent the exacerbation of symptoms that could lead to suicidal thoughts and/or actions (US Preventive Services Task Force, 2014). The purpose of this quality improvement project is to develop an evidence-based screening protocol for healthcare providers to use within a college healthcare setting with students aged 18-24 years for earlier identification and treatment of depression. This age range and population group was chosen because available literature indicates that this is the most vulnerable age in which depression can develop within this population that is at high risk for depression and other mental health disorders (U.S. Preventative Services Task Force [USPSTF], 2014).

Risk for Depression

College students are confronted with many events associated with developmental life transitions within a short amount of time, including graduation from high school, and often moving out of a parent's home, and experiencing freedom from parental rules. For a number of college students, newfound independence is challenging to manage in regards to making sound choices about strategies for success to manage new challenges of expectations for college level academic performance, as well as lifestyle choices in areas such as recreational psychoactive substances. Additional sources of stress may include job duties and employment to support the costs of attending college. Amidst these multiple developmental transitions and challenges to coping, many young adults experience their first signs of depression just before or during their college years (University of Michigan Health System, 2015). Untreated depression often is associated with an increased likelihood of school failure, social isolation, promiscuity, self-medication with drugs and alcohol and even suicide (Nease, Klinkman, & Aikens, 2006).

Access to healthcare for mental health services

Access to healthcare continues to be a barrier to mental health however, many public and private colleges and universities provide low cost or even free health care to students that encourages screening and treatment of students suffering from depression (Eisenberg, Speer, & Hunt, 2012). One survey found that 64% of college students who stopped attending college did so due to mental health related issues and that 50% of these students never accessed any mental health services or support (National Institute of Mental Health [NIMH], 2012). According to the Jed Foundation, only 20% of students report that they would seek help from counseling centers for depression symptoms (2015). Additionally, the utilization of medical services by college students is between 60-85% whereas only 5-15% of college students utilized counseling services. Therefore, medical visits at a student health center provides an increased opportunity for depression screening as more students utilize medical services than counseling services (Chung et al., 2011).

The objectives of this DNP scholarly project are to:

1. Perform a needs assessment regarding depression screening practices used by healthcare providers in a student health center setting;
2. Develop an evidence-based depression screening protocol for healthcare providers to use in their care of college students aged 18-24 years in a student health center setting.
3. Provide education for healthcare providers to increase their awareness & consistent use of an evidence-based depression screen for college students aged 18-24 years who seek medical services through a student health center.

Significance to health care and nursing

The eight DNP Essentials provide guidance for clinical doctoral nursing education and practice. Doctoral programs such as the DNP focus heavily on evidence-based practice change and application of evidence into advanced nursing practice (American Association of Colleges of Nursing [AACN], 2006). Leadership, innovation, policy and advancement of the profession are just a few of the eight essentials.

Three DNP Essentials formulate the basis for this process improvement protocol. These include DNP Essentials I, II, and III. Essential I: Scientific Underpinnings for Practice focuses on the utilization of nursing science, theories, and models to serve as a guide for the scholarly project. This DNP project uses Erikson's Psychosocial Theory of adolescent and young adulthood development. Larrabee's (2009) Model of Evidence Based Change is used for guidance in promoting change within healthcare.

The DNP Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking comes into play. The DNP student was required to first assess the organization's strengths and weaknesses and build upon these ever changing concepts in order to implement and sustain the quality improvement initiative. Changes in practice are not fluid and roadblocks should be identified early. The DNP student must provide effective solutions to these barriers. Additionally, effective communication skills are required in order to gain acceptance of the change. If others do not feel well informed of their role in the improvement initiative or do not feel supported during the process change, then the improved protocol can be jeopardized. By possessing strong leadership and effective communication skills, the DNP can provide the resources to increase overall patient quality with this project's improved depression screening protocol.

DNP Essential III focuses on development of Clinical Scholarship and Analytical Methods for Evidence-based Practice. This essential requires the DNP student to identify a problem or gap in practice which served as the basis of the quality improvement in order to increase patient outcomes. The advanced practice DNP student realized that evidence-based depression screening approaches were not being used within the student healthcare setting. An evaluation of the needs assessment confirmed this. By reviewing the evidence-based literature for guidance regarding depression screening processes, several evidence-based depression screening tools were identified. Chapter II presents a systematic review and appraisal of the literature.

Chapter II

Review of Literature

Databases for review

In the review of relevant literature regarding depression best practices, clinical practice guidelines and screening tools, the following databases were utilized including National Guideline Clearinghouse, Cochrane Library, UpToDate, PubMed, CINAHL, ClinicalKey, PsychiatryOnline, and PsycInfo for depression literature. Systematic reviews and meta-analyses resources using keywords such as depression, guidelines, best practices, evidence-based practice, treatment, management, college students, young adults, adolescents, mental health, and screening tools were reviewed. Additional resources such as National Institute of Mental Health (NIMH), Substance Abuse and Mental Health Services Administration (SAMHSA), the National Alliance on Mental Illness (NAMI), the Ohio Mental Health and Addiction Services (MHAS) and The American College Health Association (ACHA) were reviewed. This section is organized according to study screening rationale, evidence-based guidelines for treatment, gaps within the literature, and project frameworks.

Study screening rationale

The United States Preventative Services Task Force (USPSTF) recommends depression screening in adults in practices that can provide resources of diagnosis, effective treatment and follow up. The USPSTF also recognizes the Patient Health Questionnaire-2 (PHQ-2) as an accurate depression screening tool in adolescents, adults, and older adults and thus, recommends this tool as an evidence rating B or high certainty that the net benefit is moderate and there is moderate certainty that the net benefit is moderate to substantial. Therefore, this service should

be offered or provided to patients when adequate resources and follow up are available (U.S. Preventative Services Task Force [USPSTF], 2014). The PHQ-2 asks two questions and assesses for the presence of anhedonia or depressed mood in the last two weeks reflecting a 97% sensitivity and 67% specificity for assessing depressive symptoms in adults (Maurer, 2012) and further prompting the assessment of depression symptoms and utilization of the Patient Health Questionnaire-9 (PHQ-9) screening tool. While the PHQ-2 does not diagnose depression, subsequent screening with the PHQ-9 does assist in identification of a depressive disorder and is more and more commonly used to confirm PHQ-2 results. (Maurer, 2012). The PHQ-2 screening tool can be viewed in Appendix A.

There are multiple studies that have examined the screening performance of the PHQ-2 in relation to other screening and diagnostic tools for assessing depression. One study consisted of a randomized control trial of screening for depression and focused on the use of the PHQ-2 solely in primary care offices in order to validate the PHQ-2 and PHQ-9 using the computerized Composite International Diagnostic Interview (CIDI) as the reference. A sample of 2,642 participants were randomly placed into one of three groups including the PHQ-9, the Two Questions With Help Question (TQWHQ) or the control group, which provided no depression screening. Results found the PHQ-2 to have a sensitivity of 86% and a specificity of 78% for major depressive disorder (Arroll et al., 2010). Study implications suggested the PHQ-2 was a useful, efficient tool assisting healthcare providers in depression screening (Arroll et al., 2010).

Another study measured concurrent validity in a sample of outpatients from 12 family practice offices by comparing the PHQ-2 to four longer self-reported questionnaires including the Hospital Anxiety and Depression Scale (HADS), the World Health Organization Five-Item Well-Being Index (WBI-5), the Twelve-Item Short Form Health Survey (SF-12) and the

Structured Clinical Interview for DSM-IV (SCID). In this study, 1619 participants completed the questionnaires and found the PHQ-2 to have a sensitivity of 87% and a reliability of 83% with an overall accuracy of 90% for major depressive disorder and 89% for any depressive disorder. Results of the study also suggest the PHQ-2 to be a valid and practical tool to assess depression diagnosis, severity and outcome comparable to more lengthy tools and accurately demonstrated improving, unchanged or worsening depression (Lowe, Kroenke, & Graf, 2005).

Additionally, another large study evaluated the PHQ-2 and consisted of 6000 outpatients in eight primary care offices and seven obstetrics/gynecology offices. Results of the study found an 83% sensitivity and a 92% specificity by assessing concurrent validity by utilizing the 20-item Short Form General Health Survey, self-reported sick days, clinic visits and symptom related difficulties (Kroenke, Spitzer, & Williams, 2003).

Further supporting the use of the PHQ-2 screening tool, an article published by the American Family Physicians reported that the PHQ-2 was the best brief screening tool for depression to use during routine office visits. Additionally, positive results can be followed by the more in-depth PHQ-9 to confirm the diagnosis and severity (Ebell, 2008) when the use of the PHQ-2 is identified as the most appropriate screening tool to use within the specific population.

Several researchers use the Patient Health Questionnaire-9 or the PHQ-9 (Appendix B), a patient self-administered tool for diagnosis and severity monitoring of depression which correlates with the DSM-V depression criteria and can effectively detect clinical change (Lowe, Kroenke, & Herzog, 2004). The PHQ-9 has well established validity, reliability, and ease of use (Chung et al., 2011). A meta-analysis of 14 studies found the PHQ-9 to have a sensitivity of 81% and a specificity of 92% for detecting major depressive symptoms in a primary care setting

(Gilbody, Richards, Brealey, & Hewitt, 2007). In similar studies, the PHQ-9 was found to have a 61% sensitivity and a 94% specificity for identifying depression in adults (Nease & Maloin, 2003). While the PHQ-9 can be used as a screening tool, it is utilized more and more as a depression confirmation after a positive PHQ-2 is assessed (Maurer, 2012).

There is also a PHQ-9 Modified for Teens that can be used for patients 12-18 years old and annual screening is recommended by the American Academy of Pediatrics and the U.S. Preventative Services Task Force. This screening tool can be administered and scored in less than 5 minutes (American Academy of Pediatrics, 2010). This modified screening tool was also found to have a sensitivity of 89.5% and a specificity of 77.5% for detecting adolescents meeting the criteria for depression on the DSM-IV criteria (Richardson et al., 2010).

Evidence-based guidelines for treatment

The review of literature included multiple treatment guidelines. While the student health center in this project does not use a particular treatment guideline, the guidelines described below integrates the PHQ-2 and PHQ-9 screening tools into the depression treatment protocols.

The Ohio State University Wexner Medical Center provides a guideline for the management of depression in adults that encourages screening with the PHQ-9 tool. Recommended treatments include exercise, self-management, and social support, followed by antidepressants for mild to moderate depression. The guideline also suggests that with moderate to severe depression, therapy should include a combination of antidepressants and structured psychotherapy. Treatment should be monitored every two to six weeks to review the treatment plan, re-evaluate contributing factors and reassess comorbidities. The PHQ-9 can also assist in

determining treatment response or clinical change during follow up (The Ohio State University Wexner Medical Center [OSUWMC], 2014).

The McArthur Depression Management toolkit guideline identifies possible depression through the use of PHQ-2 questions and progression to the PHQ-9 which correlates with DSM - IV criteria for major depressive disorder. Once depression is identified, treatment steps include supportive counseling and coping skills, antidepressants, referral to psychological counseling, combination treatment of antidepressants and psychological counseling, and evaluation of patient response to treatment. Subsequent PHQ-9 scores at follow up appointments, depending upon depression severity, assist in determining ongoing treatment needs (MacArthur Foundation, 2009).

The National Institute for Health and Clinical Excellence (NICE) adult depression guidelines focus on stepped care after assessment and recognition of depression is identified. For possible depression concerns, the guideline suggests asking the same two questions used in the PHQ-2 screening, “Over the past month, have you been down, depressed or hopeless?” and “Over the past month, have you had little interest or pleasure in doing things?” If the answer is yes to either question, then a comprehensive depression assessment is required. Depending upon the severity of the depression, intervention such as cognitive behavior therapy (CBT), antidepressant medications, and psychological counseling should be initiated (National Institute for Health & Clinical Excellence [NICE], 2009).

Gaps in the literature

Gaps in the literature include screening methods and guidelines which are not tailored to college aged students, and differences in the timing of screening such as only at new patient

visits, at every visit or annually in primary care settings. Additionally, data on healthcare provider satisfaction regarding the use of screening tools is lacking.

Frameworks

There were two frameworks utilized for this scholarly project. Erikson's (1950) Psychosocial Theory focuses on the development processes of the college student population while the Evidence-Based Practice Change Model (Larrabee, 2009) focuses on the quality improvement. Each framework will be discussed in detail below.

Erikson's Psychosocial Theory

Erikson's Psychosocial Theory focusing on development stages (Erikson, 1950) can be correlated to the mental health of college students aged 18-24 years. Within the Psychosocial Theory, the Adolescence stage involves Identity vs. Role Confusion in which the individual is confident and emotionally stable therefore making independent decisions that influence one's life and decides upon commitments, relationships and career paths. However, if role confusion is present, then self-doubt and lack of confidence comes into play and long term commitments and relationships will not exist. The college student may experience uncertainty towards career paths and academic major, avoid social situations and experience a lack of focus socially which may increase the risk for depression. The Young Adulthood stage involves Intimacy vs. Isolation, in which the individual pledges one's self to another individual, work commitment or entity and demonstrates personal sacrifice. Isolation in this stage presents as the inability to keep relationships and unclear career paths, while experiencing aloneness and withdraw. Tasks are unresolved and there is an inability to devote one's self to another (Townsend, 2015). Therefore, college students suffering from depression may experience role confusion as evidenced by lack

of confidence and self-doubt which then transforms into lack of social commitments, job exploration and results in a sense of isolation and inability to give one's self in relationships. These individuals may feel alone and quit college due to lack of direction in life or lack of focus for career path. In addition, they are unable develop relationships socially and academically.

Risk for depression may increase due to stressors within the academic years and psychosocial roles. Additionally, as previously mentioned, age is a significant risk as depression symptoms tend to manifest just before or during the college years (University of Michigan Health System, 2015). Independent living duties, higher academic demands, social conflict and increased alcohol and drug exposure can create stress within a student's life. Students who lack effective coping strategies are more likely to engage in poorer health maintenance and lifestyle choices, such as risky sexual behaviors, alcohol/drug use, and inadequate rest patterns that result in sleep deprivation and further diminished coping ability for managing stressors (University of Central Florida Counseling & Psychological Services, 2016).

Evidence-based practice change model

Five of the six steps in Larrabee's of the Model of Evidence Based Practice Change (2009) (Appendix C) were used in this project. These steps will serve as the guide for the depression screening practices of college students by healthcare providers in the student health center.

Step One of the model assesses the current practice and identifies a problem with the current depression screening process. Identification of the problem was found to be the lack of standardization in the depression screening process by health care providers during medical

appointments at the student health center. Identification of the assessment included screening tools which, if utilized, tended to be either PHQ-2 or PHQ-9. The lack of depression screening and treatment overall by college health centers is also supported by the literature and results in untreated depression and consequences. The problem was identified by the DNP student after completing a needs assessment. Thus, it was determined that all healthcare providers had significantly variable screening practices which once again confirmed the lack of standardization of screening.

Step Two involves examining the available literature for best practices, guidelines, and research focusing on the screening of depression. Identifying appropriate search words, choosing appropriate database use and determining the hierarchy of evidence is involved in this step. This DNP project links the intervention of consistent depression screening via the use of screening tools, PHQ-2 and PHQ-9, to increase the identification of depression and thus initiate more timely treatment. Step Three involves a meta-analysis of the literature to be performed of the material identified in Step Two. This in-depth review of literature will serve as a guide for the development of the evidence-based depression screening protocol and translation of research.

Step Four focuses on the practice change design for this improved depression screening protocol which suggests screening for depression utilizing the PHQ-2 screening tool on every student presenting at the student health center for care. Providers will be able to quickly scan the chart and identify the last depression screening date/score and compare the results to the current score if necessary. An educational session via a Panopto presentation will review the improved depression screening protocol steps and provide background information regarding depression screening importance.

Step 5 includes the evaluation of the depression screening process and cost. The evaluation of the screening process may include ease of use, allocation of resources, cost, and feasibility which were obtained during a healthcare provider group discussion. Additionally, Step 6 of the model would also need to be performed after the completion of the DNP program. Future implications for use such as needed adaptations or changes after implementation of the protocol should be closely reviewed. Effective and timely communication of practice change to all providers and key stakeholders will likely be vitally important components of the process change and outcomes in order to employ adaptations to sustain the clinical practice change.

In summary, the literature review indicates that there is evidence-based practice screening approaches that need to be used within the assessment of depression of college aged students. This project focused on the evidence in order to develop a specific, systematic depression screening approach for college students aged 18-24 years. The next chapter delineates the methods within the project.

Chapter III

Methods

Project design

This quality improvement project is guided by Erikson's (1950) developmental model for adolescents and young adults and Larrabee's (2009) Evidence-Based Practice Change Model. The purpose of this process improvement project is to develop an evidence-based screening protocol for healthcare providers to use in a college healthcare setting with students aged 18-24 years. This age range was chosen because available literature indicates that this is a vulnerable age in which depression can develop within this population (CDC, 2014).

Development of the evidence-based protocol is based on an extensive literature review and an educational program was designed for healthcare providers practicing in the student health center. The educational program was delivered via a Panopto presentation to familiarize healthcare providers with the improved protocol. Analysis of the improved protocol was assessed by a group discussion of healthcare providers which provided feedback regarding the process changes to the protocol for implementation purposes.

Project sample

The project setting is a student health center in a private university consisting of approximately 4,000 students. All students are eligible for healthcare services at the campus student health center. Students can be self-referred or identified via referrals from the campus counseling center, professors and/or staff. This student health center uses paper charting documentation practices. The health care provider is required to provide full patient care as there is limited ancillary staff available. This project does not involve human subjects and there was no access, use or collection of data. The author completed a Human Subjects Research

Assessment (Appendix D) form. Through this process it was determined that no further formal IRB review was required. This DNP project was completed in March of 2016.

Process

This project improvement process followed these steps: needs assessment, development of the depression screening protocol, development of an educational Panopto presentation, and healthcare provider group meeting for protocol discussion.

Needs assessment

An initial needs assessment pre-dating this DNP quality improvement project was performed as part of the DNP student's clinical practice role at the student health center to ascertain healthcare provider current practice approaches in assessing and treating students who they thought were depressed. The healthcare providers at the student health center included one physician, two advanced practice nurse practitioners, one clinical counselor and one psychologist. The needs assessment was obtained through in-person interviews and email communication. Results of the needs assessment determined varying clinical practices ranging from consistent use of depression screening of students to the other end of the spectrum with no use of depression screening. Thus, the need for an improved depression screening process was identified. The below questions were asked during the needs assessment.

- Do you screen for depression?
- Do you use a depression screening tool? If so, which one do you use?
- Why do you use this particular screening tool?

- How do you decide when to use the tool during your management of depression with your patient(s)?
- If you use the screening tool again, how often do you use it during the management of depression with your patient(s)?

Depression screening protocol development

A literature review on the use of screening tools was performed and assisted in the development of an evidence-based depression screening protocol. The Patient Health Questionnaire-2 (PHQ-2) assesses for the presence of anhedonia or depressed mood in the last two weeks and has a 97% sensitivity and 67% specificity in adults (Maurer, 2012). While the PHQ-2 does not diagnose depression, subsequent screening with the PHQ-9 assists in identification of a depressive disorder and is more and more commonly used to confirm PHQ-2 results. (Maurer, 2012). The PHQ-2 consists of two questions which include, “Over the last two weeks, have you been bothered by any of the following problems? The two items include, “little interest or pleasure in doing things” and “feeling down, depressed or hopeless” (Lowe et al., 2005). Any “yes” answer to either question on the PHQ-2 should be further assessed by completing the full PHQ-9 (Pfizer, 2015). The PHQ-2 screening tool can be viewed in Appendix A.

The improved protocol requires every student who seeks services at the student health center to be verbally screened using the PHQ-2. This screening will occur during the vital sign assessment and review of past medical history. See Table 1 for the depression screening protocol steps for implementation.

Table 1
<i>Depression Screening Protocol</i>
<p>Step One:</p> <p>Providers will read the two screening questions listed conveniently within the student's paper chart and record the screening score under the depression screening portion of the progress note form.</p> <ul style="list-style-type: none"> • If a student answers no to both PHQ-2 questions, document the score and proceed with office visit as usual.
<p>Step Two:</p> <ul style="list-style-type: none"> • If a student answers yes to either question on the PHQ-2, then a more in-depth PHQ-9 questionnaire is needed to further screen the student for depression.
<p>If the PHQ-9 is positive: The student is treated at the recommended evidence-based level used within a primary healthcare setting. If the student reports suicidal ideation on the PHQ-9, the student is immediately escorted to the counseling department for an emergency assessment. Following assessment, student health center counselors determine if the student should be escorted to the emergency department.</p>

Educational presentation

An educational session via a Panopto presentation was offered to healthcare providers, interns and nursing/medical students for increased awareness of the depression screening process

improvement. The Panopto presentation consisted of a power-point presentation and verbal review of the improved screening process. Objectives of the educational presentation include the review of the literature related to depression and college aged students, review of the improved depression screening protocol, review of the evidence-based screening tools to be utilized during the screening process, review of the updated patient progress notes reflecting the improved depression screening protocol and follow up regarding positive screening results. Consistent use of the depression screening protocol will be key for compliance. Increased awareness of the depression screening protocol by healthcare providers may lead to earlier detection and treatment of depression. The Panopto presentation can be viewed by accessing the following link <https://panopto.con.ohio-state.edu/Panopto/Pages/Viewer.aspx?id=2c4b3864-d7a5-475a-86d0-b7ac4d179a80>

Group discussion

A group discussion with healthcare providers was held to share rationale for the development of the protocol and helped to identify thoughts and concerns regarding the improved depression screening protocol. The group discussion occurred on March 3, 2016 at the student health center and was approximately one hour in length. Attendance included one nurse practitioner, one medical student, one family nurse practitioner student and a licensed clinical counselor. The group session was performed in the healthcare provider's office with the discussion facilitator (DNP student) located in the front of the room. Prior to the start of the group discussion, the Panopto educational presentation was viewed in order to refresh the group participants of the objectives and purpose of the improved depression screening protocol. The group discussion included a brief literature review, the improved depression screening protocol,

and the revised progress note form that were all presented within the Panopto educational presentation. Specific discussion questions were used to facilitate discussion and included the following:

- Was the purpose of the protocol clearly identified?
- Are there sufficient resources available such as staff, time, money and expertise for implementation?
- Are there positive or negative concerns regarding the protocol?
- Will this proposed protocol positively impact student outcomes?
- Will this protocol change your current screening practice?
- Did the educational presentation increase awareness or enhance professional development of depression screening processes?

Detailed discussion notes by the discussion facilitator were typed during the group discussion. Analysis of the group discussion began immediately following the completion of the discussion session. Recurrent approaches/themes and thoughts regarding whether to screen or not to screen focused on positive aspects, not so positive aspects, screening and counseling availability and will be discussed in greater detail in Chapter IV.

Revision of progress note

As mentioned previously, the student health center in this project utilizes paper documentation practices. The progress note was revised to include the evidence-based practice protocol approach. The PHQ-2 screening questions are embedded into the progress notes near the vital signs for ease of administration. The provider will read the two screening questions and

circle either “Y” for a “yes” response or “N” for a “no” response from the student. A reminder for healthcare providers to proceed to the more in-depth PHQ-9 screening tool is also listed when students answer “yes” to either question resulting in a positive screening. See Appendix F for the revised progress note form.

Chapter IV

Findings

Results

The purpose of this scholarly project was to assess current depression screening practices of healthcare providers and develop an evidence-based depression screening protocol of college students aged 18-24 years in a student health center. Discrepancies with depression screening practices of healthcare providers working in the student health center were identified via a needs assessment. A depression screening protocol was developed for consistent screening of college students by healthcare providers in the student health center. A review of EBP literature showed that the PHQ-2 and PHQ-9 are accurate evidence-based depression screening tools for adolescents and young adults in the primary care setting (USPSTD, 2014). The PHQ-2 is initially used to screen for depressive symptoms. The PHQ-9 is then used when a positive screen occurs as it further screens for suicidal thoughts. Depression treatment and mental health referral follows according to the outcomes documented by above mentioned tools.

An educational session via a brief nine minute Panopto presentation was developed and emailed to healthcare providers, interns and nursing/medical students for increased awareness of the improved depression screening process. Specific instructions and screening forms were also discussed and reviewed regarding the healthcare provider's role within the process improvement. Consistency and standardization of the depression screening protocol was stressed throughout the presentation. The Panopto educational presentation can easily be edited to update statistics, make adaptations to the protocol and update paperwork associated with the depression screening

if needed in the future. The goal of the educational presentation focused on increased awareness of the depression screening protocol by healthcare providers for earlier detection and treatment of depression in college students aged 18-24 years.

The progress note was revised to include the screening protocol. The PHQ-2 screening questions were embedded into the progress notes near the vital signs for ease of administration. Healthcare providers were not required to memorize the screening questions or grade the screening tool but rather read two questions and circle Y or N. A reminder for healthcare providers to proceed to the more in-depth PHQ-9 screening tool is also listed if the PHQ-2 screening is positive.

Discussion

The group discussion focusing on the depression screening protocol was analyzed and identified several main themes. The group discussion responses regarding the protocol are listed below.

Positive thoughts for screening

- Screening is free
- Does not disrupt work flow
- Sufficient resources available on campus
- Takes seconds to perform the screening
- Screening questions listed on progress note
- No memorization of screening tool required

Not so positive thoughts for screening

- Concern for time constraints with busy schedules
- Insurance coverage if outside referral is needed
- Students upset by asking screening questions
- More counselors needed to accommodate increased numbers of students with positive screening results

Screening

- Consistent screening of every student
- Identification of depression from somatic complaints
- Earlier identification of depression and treatment
- Increased knowledge of resources available to students on campus
- Increased healthcare provider awareness of protocol

Counseling Availability

- Concern for overwhelming the counseling department
- Current 2-3 week waiting list at present time for initial counseling appointments
- No depression screening if resources are not available
- Mood disorders more than actual depression diagnosis

Overall, group discussion participants found the protocol to be cost effective, easy to use and does not disrupt workflow. Increased identification of possible depression was viewed positively

however there was a potential concern of overwhelming an already busy counseling department as resources to treat must be available. The healthcare providers reported that the Panopto educational presentation increased awareness of the importance of depression screening and provided familiarity by reviewing protocol steps, documentation and follow up practices to positive screenings. The Panopto educational presentation can easily be edited if needed in the future to remain current with evidence-based practices.

Conclusion

This scholarly project focused on a quality improvement process in order to develop a depression screening protocol for college students in a student health center while utilizing evidence-based practices. According to the six aims of quality identified within the *Crossing the Quality Chiasm*, care should be “safe, effective, patient-centered, timely, efficient and equitable” (Institute of Medicine [IOM], 2001). The improved depression screening protocol correlates with the identified aims for increased patient outcomes related to depression. Additionally, the key stakeholders within this scholarly project are identified as the healthcare providers treating the college students in a student health center. The healthcare providers were actively engaged within this quality improvement process as evidenced by participation in the needs assessment, review of Panopto educational presentation and participation in the group discussions. Concerns and thoughts expressed during the group discussions were recorded and categorized into themes for review. Overall impressions were highly positive, proposed changes were readily accepted and healthcare providers voiced motivation to move forward with the screening protocol. The implementation of this depression screening protocol may demonstrate increased quality of care and safety of students by identifying depression and initiating earlier treatment.

Chapter V

Conclusion

Project Summary

This DNP project focused on improving depression screening processes of college students aged 18-24 years for increased quality of care and improved patient outcomes. Quality improvement involves a continuous process of actions that lead to the improvement in healthcare services leading to an increase in healthcare outcomes of a certain patient population (United States Department of Health and Human Services, 2016). This project also coincides with the DNP Essentials promoting evidence-based practice and translation of research (AACN, 2006). The development of a standardized evidence-based depression screening protocol was formulated, an educational presentation was developed for increased provider awareness of the improved protocol and progress note forms were revised to reflect the protocol implementation. This quality improvement project utilized the Model of Evidence-Based Change (Larrabee, 2009) which served as a guide in order to develop the depression screening protocol. This DNP project will supply healthcare providers with an improved protocol, education and updated documentation forms in order to improve patient outcomes by utilizing an evidence-based, standardized depression screening protocol.

Future Implications

This DNP project thus far has resulted in the development of a quality improvement protocol focusing on the depression screening of college students aged 18-24 years at a student health center. The proposed changes have been approved by healthcare providers and group

discussion feedback assisted in edits to the protocol for increased chances of compliance and utilization. While the development of the Panopto educational presentation was completed and the progress note form was revised, the depression screening protocol still requires implementation as a clinical practice change. There was not a sufficient amount of time to implement the depression screening protocol prior to graduation. However following graduation, the implementation of the protocol by healthcare providers can be utilized and evaluated for additional changes to the protocol if needed. Findings of this project can be shared with other colleges and universities to benefit students. It is also the responsibility of the DNP to disseminate this knowledge to others to further expand this translation of research for clinical practice change through avenues such as in staff meetings, department in-services, conference presentations, and published manuscripts. Future projects to address the policy level needs include assessment of current mental health programs and strategies utilized at the high school and collegiate level to develop partnerships in order to provide evidence-based interventions to promote emotional wellness. Establishing relationships with high school counselors may also assist in the use of evidence-based practice to increase mental wellness using translation of research to encourage the use of programs found to be beneficial for students. For example, the utilization of programs such as COPE (Lusk & Melynck, 2011) which teaches coping skills and empowerment in adolescents may be used by local school districts. Additional needs may include grant writing to obtain money in order to pay for the cost of programs such as the COPE program and to staff mental health counselors. Effective partnerships with university counseling departments are also important to establish fluid communication regarding students demonstrating depressive symptoms regarding care and establishing clear steps in the plan of care for these identified students. The DNP may assist in advocating for increased numbers of

clinical counselors on college campuses so that access to care for students is available and timely. Additionally, the DNP can also serve on professional organization committees such as the American College Health Association to disseminate evidence-based practice findings and promote programs focusing on mental health. Ultimately, the goal of this scholarly project as well as healthcare overall, is to provide high quality, evidence-based care for improved patient outcomes and DNP prepared advance practice nurses possess the strengths and abilities to make this goal come to fruition.

Limitations

There are some limitations of this scholarly project. Limitations of the needs assessment by the healthcare provider may include whether or not the provider choose to disclose accurate depression screening practices. Group discussion dynamics of the healthcare providers directly involved with the process improvement may skew discussion results. One group member may dominate the discussion while another group member says very little. Limitations are associated with the absence of two health care providers during the group discussion session resulting in the potential for differences in opinions during a discussion group setting versus individual responses. Additionally, the number of healthcare providers involved in the improved process is small and therefore may not represent the views of a large group of providers.

References

- American Academy of Pediatrics. (2010). *PHQ-9 modified for teens*. Retrieved from <http://ppn.mh.ohio.gov/portals/0/pdf/PHQ-9%20Modified%20for%20Teens.pdf>
- American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. Retrieved from (USPSTD, 2014)<http://www.aacn.nche.edu/publications/position/DNPEssentials.pdf>
- American College Health Association. (2012). *Healthy campus 2020*. Retrieved from <http://www.acha.org/healthycampus/>
- American College Health Association. (2014). *American college health association- National college health assessment II* [Spring 2014 Reference Group Executive Summary]. Retrieved from http://www.acha-ncha.org/docs/ACHA-NCHA-II_ReferenceGroup_ExecutiveSummary_Spring2013.pdf
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., ... Hatcher, S. (2010). Validation of PHQ-2 and PHQ-9 to screen for major depression in the primary care population. *Annals of Family Medicine*, 8, 348-353. <http://dx.doi.org/10.1370/afm.1139>.
- Barrett, E. (2002). What is nursing science? *Nursing Science Quarterly*, 15, 51-60. <http://dx.doi.org/doi:10.1177/089431840201500109>
- Beck, A., Crain, A., Solberg, L., Unutzer, J., Glasgow, R., Maciosek, M., & Whitebird, R. (2011). Severity of depression and magnitude of productivity loss. *Annals of Family Medicine*, 9, 305-311. <http://dx.doi.org/10.1370/afm.1260>

Centers for Disease Control and Prevention. (2014). *Mental health basics*. Retrieved from <http://www.cdc.gov/mentalhealth/basics.htm>

Centers for Disease Control and Prevention. (2015). *Youth suicide*. Retrieved from http://www.cdc.gov/violenceprevention/pub/youth_suicide.html

Chism, L. A. (2010). *The doctor of nursing practice: A guidebook for the role development and professional issues*. Sudbury, MA: Jones & Bartlett Learning.

Chung, H., Klein, M. C., Silverman, D., Corson-Rikert, J., Davidson, E., Ellis, P., & Kasnakian, C. (2011). A pilot for improving depression care on college campuses: Results of the college breakthrough series-depression (CBS-D) project. *American Journal of College Health*, 628-639. <http://dx.doi.org/10.1080/07448481.2010.528097>

Ebell, M. (2008). Screening instruments for depression. *American Academy of Family Physicians*, 78, 244-246. Retrieved from www.aafp.org/afp/poc

Eisenberg, D., Speer, N., & Hunt, J. B. (2012). Attitudes and beliefs about treatment among college students with untreated mental health problems. *Psychiatric Services*, 63, 711-713. <http://dx.doi.org/10.1176/appi.ps.201100250>

Erikson, E. (1950). *Childhood and society*. Norton, New York: W.W. Norton.

Gilbody, S., House, A., & Sheldon, T. (2005). Screening and case finding instruments for depression. *Cochrane Database Systematic Review*, 4. Retrieved from <http://web.a.ebscohost.com.proxy.lib.ohio-state.edu/ehost/pdfviewer/pdfviewer?sid=6d4abeef-ef82-4af5-b70e-8207aaa90d36%40sessionmgr4002&vid=1&hid=4114>

Gilbody, S., Richards, D., Brealey, S., & Hewitt, C. (2007). Screening for depression in medical settings using the Patient Health Questionnaire: A diagnostic meta-analysis. *Journal of*

General Internal Medicine, 58, 1596-1602. Retrieved from

<http://web.b.ebscohost.com.proxy.lib.ohio->

[state.edu/ehost/pdfviewer/pdfviewer?sid=a5779fd1-5b0d-4261-8672-](http://web.b.ebscohost.com.proxy.lib.ohio-state.edu/ehost/pdfviewer/pdfviewer?sid=a5779fd1-5b0d-4261-8672-)

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Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academies Press.

Kroenke, K., Spitzer, R., & Williams, J. (2003). The patient health questionnaire-2: Validity of a two-item depression screener. *Medical Care*, 41, 1284-1292. Retrieved from

<http://ovidsp.tx.ovid.com.proxy.lib.ohio-state.edu/sp->

[3.17.0a/ovidweb.cgi?WebLinkFrameset=1&S=IGODFPICOLDDPJPINCJKLGMCNAJ](http://ovidsp.tx.ovid.com.proxy.lib.ohio-state.edu/sp-3.17.0a/ovidweb.cgi?WebLinkFrameset=1&S=IGODFPICOLDDPJPINCJKLGMCNAJ)

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[00008.pdf&filename=The+Patient+Health+Questionnaire-2%3a+Validity+of+a+Two-](http://ovidsp.tx.ovid.com.proxy.lib.ohio-state.edu/sp-3.17.0a/ovidweb.cgi?WebLinkFrameset=1&S=IGODFPICOLDDPJPINCJKLGMCNAJGAA00&returnUrl=ovidweb.cgi%3f%26Full%2bText%3dL%257cS.sh.22.23%257c0%257c00005650-200311000-00008%26S%3dIGODFPICOLDDPJPINCJKLGMCNAJGAA00&directlink=http%3a%2f%2fgraphics.tx.ovid.com%2fovftpdfs%2fFPDDNCMCLGPIOL00%2ffs043%2fovft%2flive%2fgv021%2f00005650%2f00005650-200311000-00008.pdf&filename=The+Patient+Health+Questionnaire-2%3a+Validity+of+a+Two-)

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[live/gv021/00005650/00005650-200311000-00008](http://ovidsp.tx.ovid.com.proxy.lib.ohio-state.edu/sp-3.17.0a/ovidweb.cgi?WebLinkFrameset=1&S=IGODFPICOLDDPJPINCJKLGMCNAJGAA00&returnUrl=ovidweb.cgi%3f%26Full%2bText%3dL%257cS.sh.22.23%257c0%257c00005650-200311000-00008.pdf&filename=The+Patient+Health+Questionnaire-2%3a+Validity+of+a+Two-Item+Depression+Screener.&pdf_key=FPDDNCMCLGPIOL00&pdf_index=/fs043/ovft/live/gv021/00005650/00005650-200311000-00008)

Larrabee, J. (2009). *Nurse to nurse: Evidence-based practice*. New York, NY: McGraw-Hill.

Lowe, B., Kroenke, K., & Graf, K. (2005). Detecting and monitoring depression with a two-item questionnaire (PHQ-2). *Journal of Psychosomatic Research*, 58, 163-171.

<http://dx.doi.org/doi:10.1016/j.jpsychores.2004.09.006>

- Lowe, B., Kroenke, K., & Herzog, W. (2004). Measuring depression outcome with a brief self-reported instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). *Journal of Affective Disorders*, 81, 61-66. [http://dx.doi.org/10.1016/S0165-0327\(03\)00198-8](http://dx.doi.org/10.1016/S0165-0327(03)00198-8)
- Lusk, P., & Melynck, B. (2011). The cognitive behavioral COPE intervention for depressed adolescents: Outcomes and feasibility of delivery in 30-minute outpatient visits. *Journal of the American Psychiatric Nurses Association*, 17, 226-236. <http://dx.doi.org/doi:10.1177/1078390311404067>
- MacArthur Foundation. (2009). *MacArthur initiative depression tool kit*. Retrieved from https://www.lacare.org/sites/default/files/depression_management_toolkit_2009_macarthur_toolkit.pdf
- Maurer, D. (2012). Screening for depression. *American Academy of Family Physicians*, 85, 139-144. Retrieved from www.aafp.org/afp
- Moran, K., Burson, R., & Conrad, D. (2014). *The doctor of nursing practice scholarly project: A framework for success*. Burlington, MA: Jones & Bartlett Learning.
- National Institute for Health & Clinical Excellence. (2009). *Depression in adults: Treatment and management of depression in adults* [clinical guideline]. Retrieved from www.guidance.nice.org.uk/cg90
- National Institute of Mental Health. (2012). *Depression and college students*. Retrieved from <http://www.nimh.nih.gov/health/publications/depression-and-college-students/depression-and-college-students.pdf>

- Nease, D., Klinkman, M., & Aikens, J. (2006). Depression care findings in primary care: A method for the mandate. *International Journal of Psychiatry in Medicine*, 36, 141-151.
<http://dx.doi.org/10.2190/3FGL-EKXQ-EAG2-B1UF>
- Nease, D., & Maloin, J. (2003). Depression screening: A practical strategy. *Journal of Family Practice*, 52, 118-124. Retrieved from <http://web.a.ebscohost.com.proxy.lib.ohio-state.edu/ehost/pdfviewer/pdfviewer?sid=4b66efa8-cd7d-40b0-a59d-14b64340b29c%40sessionmgr4003&vid=1&hid=4114>
- Pfizer. (2015). *Patient health questionnaire-2*. Retrieved from <http://www.phqscreeners.com/>
- Pfizer. (2015). *Patient health questionnaire-9*. Retrieved from <http://www.phqscreeners.com/>
- Pieh-Holder, K., Callahan, C., & Young, P. (2012). Qualitative needs assessment: Healthcare experiences of underserved populations in Montgomery County, Virginia, USA. *Rural and Remote Health*, 12, 1816. Retrieved from <http://www.rrh.org.au>
- Richardson, L., McCauley, E., Grossman, D., McCarty, C., Richards, J., Russo, J., ... Katon, W. (2010). Evaluation of the patient health questionnaire-9 item for detecting major depression among adolescents. *Pediatrics*, 126, 1117-1123.
<http://dx.doi.org/10.1542/peds.2010-0852>
- Schwartz, K. (2010). *Mental health care in the college community*. Hoboken, NJ: Wiley and Sons.
- Spitzer, R., Kroenke, K., & Williams, J. (1999). Validation and utility of a self-reported version of PRIME-MD. *The Journal of the American Medical Association*, 282, 1737-1744.
<http://dx.doi.org/doi:10.1001/jama.282.18.1737>

The Ohio State University Wexner Medical Center. (2014). *Management of depression in adults*.

Retrieved from

<https://onesource.osumc.edu/sites/ebm/Documents/Guidelines/Depression.pdf>

Townsend, M. (2015). *Psychiatric mental health nursing: Concepts of care in evidence-based practice* (8th ed.). Philadelphia, PA: E.A. Davis.

United States Department of Health and Human Services. (2016). *Quality improvement*.

Retrieved from <http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/>

University of Central Florida Counseling & Psychological Services. (2016). *College student development: The journey from freshman to senior*. Retrieved from

<http://caps.sdes.ucf.edu/parents-development>

University of Michigan Health System. (2015). *Depression center*. Retrieved from

www.depressioncenter.org/docc

U.S. Preventative Services Task Force. (2014). *Depression screening*. Retrieved from

<http://www.uspreventiveservicestaskforce.org/3rduspstf/depression/depressrr.htm>

Appendix A

Patient health questionnaire-2 (PHQ-2)

Patient Health Questionnaire-2: Screening Instrument for Depression

Over the past two weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than one-half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3

NOTE: If the patient has a positive response to either question, consider administering the Patient Health Questionnaire-9 or asking the patient more questions about possible depression.

Adapted from patient health questionnaire (PHQ) screeners (Pfizer, 2015).

Appendix B

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the last 2 weeks, how often have you been
bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns + +

(Healthcare professional: For interpretation of TOTAL, TOTAL:
please refer to accompanying scoring card).

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	_____
	Somewhat difficult	_____
	Very difficult	_____
	Extremely difficult	_____

PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder

- if there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.

Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up ✓s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying **PHQ-9 Scoring Box** to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

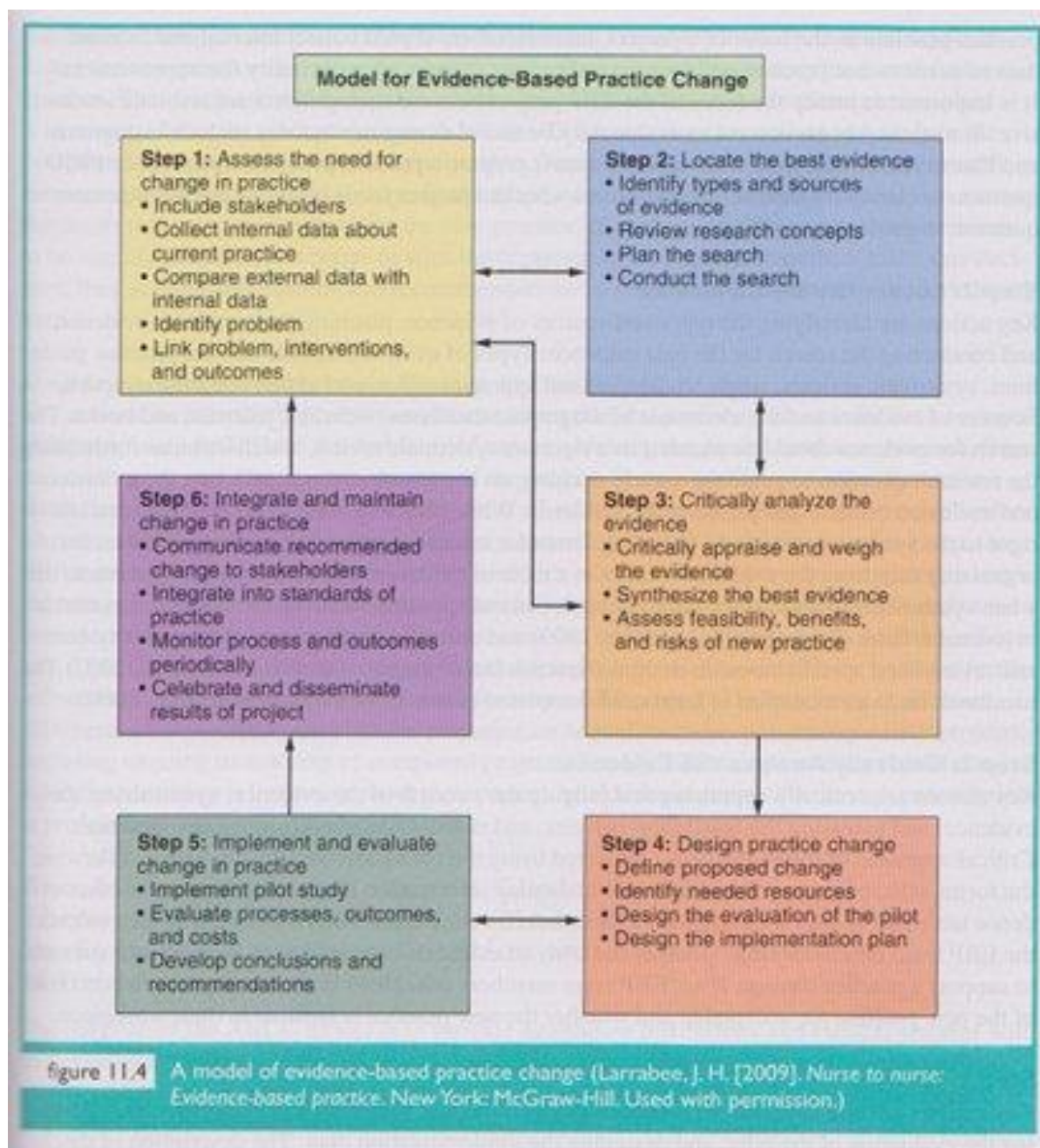
Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

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Appendix C

Model of evidence-based change



Appendix D

Human subjects research assessment form

The Ohio State University-College of Nursing	
Human Subjects Research Assessment Form	
Instructions: 1. Please complete the requested project information, as this form may be used for documentation that neither IRB review nor an exemption is required. 2. Please select the appropriate answers to each question in order as they appear. If all of the questions are answered without receiving an error message, the form must be printed AND signed as certification that the project is "not human subjects research," and does not require IRB review or exemption. If you are unsure how to answer any of the questions, please contact ORRP for additional guidance.	
Project Information:	
Name of PI, advisor, or mentor:	Dr. Barbara Warren
Title of Project	Depression screening of college students at a student health center: A process improvement initiative
Brief Description of Project/Goals:	The purposes of this DNP scholarly project are to: Determine if healthcare providers in a college student health center utilize any depression screening tools for ages 18-24 years old; Determine what tools are used if the healthcare providers utilize them; Provide educational materials for healthcare providers focusing on the value of depression screening in college students aged 18-24 years within their student health center setting; Provide copies of the Patient Health Questionnaire 2 (PHQ-2) and Patient Health Questionnaire 9 (PHQ-9) so all healthcare providers will have access to use them within a clinic setting and Monitor the use of the screening tools by healthcare providers within a student health center setting of college students aged 18-24
Help	
Questions:	
1. Will the project involve testing an experimental drug, device (including medical software or assays), or biologic?	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Help
2. Has the project received funding (e.g. federal, industry) to be conducted as a human subjects research study?	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Help
3. In addition to any other purposes, is the project intended to develop or contribute to generalizable knowledge (e.g. testing a hypothesis) AND/OR has the project been designed in such a way that the findings will be generalizable (e.g. randomization of subjects; comparison of case vs. control)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Help
4. Will the results of the project be published, presented or disseminated outside of the institution conducting it?	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Help
If no message appears above indicating the certification is not valid, IRB Review is not required because, in accordance with federal regulations, the project does not constitute human subjects research as defined under 45 CFR 46.102(d). Print a copy of this form, have it signed by the PI, advisor, or mentor, and save with your files. This serves as record that IRB review is not required for this project.	
What do my results mean?	Signature
	Current Date 1/14/16
	Print Form

Appendix E

Depression screening needs assessment

Objective: To conduct a needs assessment of depression screening processes by healthcare providers at a college student health center

Purpose: Develop an improved depression screening process by healthcare providers

1. Do you screen for depression?
2. Do you use a screening tool? If so, what tool do you use to screen for depression?
3. Why do you use that particular depression screening tool?
4. How often do you use that screening tool during the management of depression?
5. How do you decide when to use the screening tool again during the management of depression?

Appendix F

Revised progress note form

PROGRESS NOTE – HEALTH VISIT	<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="text-align: center; margin-bottom: 5px;">NAME</div> <div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 5px;"> <div style="width: 45%; border-bottom: 1px solid black;"></div> <div style="width: 45%; border-bottom: 1px solid black;"></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%;">MRN</div> <div style="width: 45%;">DATE OF VISIT</div> </div>
-------------------------------------	---

HEALTH VISIT – INTAKE INFORMATION						
DOB	Height	Weight	Temp	Pulse	RESP	BP

Allergies (specify)		
<input type="checkbox"/> NKA	<input type="checkbox"/> Latex	<input type="checkbox"/> Medicine <input type="checkbox"/> Other <input type="checkbox"/> See Allergy Sheet

SMOKING	PACKS/DAY	ALCOHOL USE
<input type="checkbox"/> No <input type="checkbox"/> Former <input type="checkbox"/> Current		

PHQ-2 screen

1. Over the past 2 weeks, have you felt down, depressed or hopeless? ☐ Y ☐ N

2. Over the past 2 weeks, have you had little pleasure in doing things? ☐ Y ☐ N

If patient answers yes to either question, proceed to PHQ-9 screening*

REASON FOR VISIT/CHIEF COMPLAINT	
AGE	SIGNATURE
S:	
O:	
<input type="checkbox"/> VS & HT/WT NOTED	
PRIMARY CARE PHYSICIAN	PROVIDER